

CHAPTER I.

ORIGIN OF THE CORPS.

IDEA of motion telegraphy, as now practised in the United States Army and Navy, and in some of the armies

of Europe, originated with General Albert J. Myer, distinguished in later years as a meteorologist, and as the organizer of the United States and International Storm Signal Service. To his indomitable will and persistent energy may be ascribed the timely introduction of field signals into our military service, with their subsequent development and generally successful use in nearly all our armies during the War of the Rebellion.

Albert James Myer was born at Newburgh, N. Y., Sept. 20, 1827. His parents soon after removed to western New York. His mother dying in 1834 consigned him to the care of a sister, who devoted the remainder of her life to the faithful discharge of her trust. This lady was of Scottish parentage, and educated her youthful ward in the strictest tenets of the Scottish Kirk. He continued a devout believer in the Christian religion to the end. In later years he attended the Episcopal Church, preferring that form of worship.

He was a devoted lover of both ancient and modern art, and an appreciative reader of books on the subject. In science, too, his interest was unflagging. He was always abreast of the times, keeping himself well-informed on the discoveries and advances of modern science.

His devotion to his work and his interest in it were so great that when, in rapidly declining health, he was urged by anxious friends to take a rest, he replied, "What rest would it be to me if I left my work unfinished?"

Notwithstanding his marked bias for artistic and scientific pursuits, he early manifested a predilection for a military life. In his personal bearing he was every inch a soldier, tall, erect, alert, having that air of command in every look and every movement which presupposes perfect obedience. Although a strict disciplinarian he was just and impartial. He was quick to discover and reward, as far as he had the power, honest merit and earnest endeavor. He was ambitious, — ambitious to excel, ambitious to succeed, or win success out of defeat. Inheriting a large fortune, he resisted every temptation to lead a life of mere physical comfort or intellectual ease. A purpose once fixed, an ideal once formed, all the faculties of an acute mind and all the powers of a firm will were concentrated upon the accomplishment of that purpose and the attainment of that ideal.

Having determined, after serving an apprenticeship as a telegraph operator, to obtain a collegiate education, he passed through the required preparatory course and entered Hobart College, Geneva, N. Y., from which institution he was graduated in 1847. Four years later, having taken the regular course at the Buffalo Medical College, he received his degree of M. D. It has been said of Gen. Myer as a student, "that he was specially noted for the manner in which he would take hold of an idea or principle, and, following it to its length and breadth, develop all there was in it or of it." To this characteristic he no doubt owed his success in life. His graduating thesis, "A Sign Language for Deaf Mutes," contained the germs of what he subsequently developed into the art of motion telegraphy.

During this year, 1851, his attention was called to the subject of signals for military and naval use. Communication by means of lights and various symbols had been practised from time immemorial, but the systems were difficult of comprehension, while the apparatus was generally complex in character and cumbersome in form.

It became Gen. Myer's ambition to devise a system which should be characterized by the simplicity of its principles, and in which the apparatus employed should so combine strength of materials with lightness of weight that it could be transported with ease and safety. During his hours of leisure he was continually revolving in his mind various schemes for furnishing sure and rapid communication, whenever the distance could be covered with the eye.

After practising as a physician for three years, he sought and obtained a commission as assistant surgeon in the regular army. Lieut. Myer was soon ordered to New Mexico. It is said that one day, seeing some

Comanches making signals to another group of Indians on a neighboring hill by waving their lances, the thought struck him that such motions might be utilized for connecting adjacent military posts, or parts of an army in active operations. So firmly did this idea take possession of the young surgeon that he devoted much of his leisure to its development, and finally devised a system of signals which became the basis of the code or codes used through the war. He came east, explained his system to the authorities, and took out letters patent on his invention. This forethought on his part prevented some parties high in position from subsequently appropriating the results of his thought and labors.



A delay of two years followed, and in 1858 a board was appointed to examine "the principles and plans of the signalling, mode of use in the field, and course to be pursued in introducing to the army." As a result of the action of the board, experiments were instituted under the direction of the Secretary of War. In these trials he was aided by 1st Lieut. Walworth Jenkins, 1st Art., and 2d Lieut. E. P. Alexander, Corps of Engineers. The experiments were deemed very satisfactory, and the system won the favor of both the officers named.



WALWORTH JENKINS.

Lieut. E. P. Alexander (see Chapter XI.), on the breaking out of the Rebellion, organized a Signal Corps for the Confederacy, which he commanded until called to be engineer-in-chief of one of the Confederate armies, Col. William Norris of Baltimore succeeding him as chief signal officer.

Secretary Floyd, in his annual report for the year 1859, commended Lieut. Myer's system to the attention of Congress, and as a result the following bill and appropriation was passed: —

"For the manufacture or purchase of apparatus and equipment for field signals, \$2,000; and that there be added to the staff of the army one signal officer, with

the rank, pay, and allowance of a major of cavalry, who shall have charge, under the direction of the Secretary of War, of all signal duty, and all books, papers, and apparatus connected therewith."

On July 2, 1860, General Order 17 was issued from the War Department, in which was included the following : —

SIGNAL DEPARTMENT.

"Assistant Surgeon Albert J. Myer to be Signal Officer, with the rank of Major, June 27, 1860, to fill an original vacancy."

In his letter of acceptance, addressed to Col. Samuel Cooper, the Adjutant-General of the army, Maj. Myer says : —

"I have accepted this position with the view of bringing into use a service which I believe to be of very great importance to the United States. As the duties of this service are new to the army, I have the honor to request that no regulations controlling the office be issued until experience has shown what regulations are most for the interests of the service.

"I shall take leave to submit to the War Department from time to time such suggestions as my knowledge of the work to be done may seem to warrant. So far as is practicable I wish myself to assume the responsibility for the success or failure of my plans. I ask for them a fair trial, and that I may not be unnecessarily restricted in their execution."

On the 21st, in a letter dated at New York City and addressed to Lieut.-Col. Lorenzo Thomas, Assistant Adjutant-General of the army, he requests that 2d Lieut. E. P. Alexander, Corps of Engineers, be detailed for signal duty with him during the first campaign against the Indians. He adds : "I particularly request that during the first trial of signals in actual service against Indians, I may have with me an officer whom I have instructed in the use of signals, who has had practice in receiving and making them, and whose zeal and energy I know."

This request Secretary Floyd disapproved. Maj. Myer, nothing daunted, a few weeks later addressed Col. Thomas as follows : —

Lieut.-Col. THOMAS,

NEW YORK, August 9, 1860.

Asst. Adjt.-Gen., U. S. Army.

COLONEL : I have the honor to request that one of the following named officers, —Bvt. 2d Lieut. Walter McFarland, Corps of Engineers, Bvt. 2d Lieut. Horace Porter, Ordnance Corps, Bvt. 2d Lieut. W. W. McCreery, 3rd Art., be detailed for signal duty. It is proper to state that these officers have expressed their willingness to serve. I am directed to test the uses of signals in campaign. I

would respectfully represent to the General-in-Chief the necessity for a detail which will enable me to go into the field with one instructed officer, and which while thus of very great service for the duty upon which I am ordered, will obviate many dangers of future delay.

Your obedient servant,

ALBERT J. MYER,
Maj. and Signal Officer.

This was endorsed by Lieut.-Gen. Scott as follows : —

“Respectfully forwarded to the Secretary of War with a request that one of the lieutenants named may be ordered to report to Maj. Myer for the duty in question. At the instance of Lieut. Porter, I beg to add that he is anxious for the detail.”

A week later Secretary Floyd sent an order to the Commander of the Department of New Mexico to detail some suitable officer, on duty in that department, to assist Maj. Myer on his arrival.

Lieuts. McFarland, Porter, and McCreery had recently graduated from the Military Academy. At the suggestion of Lieut. R. K. Meade, Corps of Engineers, Maj. Myer visited Lieut. McFarland at his home in Brooklyn, to ask him if he would like to undertake that kind of duty. The lieutenant indicated that such an assignment would be gratifying to him, and the request was made as noted above. It failed to be granted, however, for reasons which will be presently noticed.

Of Lieut. McCreery, Col. McFarland says in a note addressed to the writer : —

“He went to Fort Pickens with the expedition which was sent to Slemmer’s assistance. He was a Virginian by birth, but would not resign as other Southerners did when ordered on this expedition. He was very unhappy over the matter, however, and while suffering under some irritating remarks about his native state, made by some of his companions, wrote and sent in his resignation. He tried to recall it the next day, or shortly after, and nearly every officer of the command united in a petition that he should be retained in the service; but it was of no avail, and he was dismissed the service for offering his resignation in the face of the enemy. He went north, reached his home in Virginia after a while, found when he got there that he must enter the Confederate service, and was killed on their side at Gettysburg.

“He was a gallant fellow and an unusually intelligent and thoughtful man, and deserved better treatment than he got. Doubtless with all the backing that he had from the garrison at Fort Pickens, he would have fared better but for the strong feeling that had been excited in the North by the restoration of an officer of much higher rank who had resigned on the ground of his being a Southerner.”

In the summer of 1860¹ Lieut. Horace Porter was stationed at West Point as an instructor in light artillery. Maj. Myer visited the post and



HORACE PORTER.

there he first met the young lieutenant, who had only a few weeks before graduated from the military academy. He revealed to him the fact that he had devised a method by which he could write out any sentence by means of three motions with a flag, and that this could be read at a distance of many miles. In their few weeks' intercourse they became quite intimate and had many discussions on methods of signalling. They went largely into the question, also, of deciphering cipher dispatches of various kinds, which led to the publication of the treatise on this subject by Gen. Myer

in his *Manual of Signals*, published in 1877. He became very anxious that Lieut. Porter should be assigned to him as an assistant, not only on account of the interest he had manifested, but also because his eyes happened to be very far-sighted. On one occasion they were practising with the telescope, looking from West Point to Newburgh, ten miles up the river. Lieut. Porter was able to read with ease some of the large signs painted on the warehouses in that place. He became quite anxious to join in the coming Navajo campaign, and Gen. Scott, who was staying at Cozzens' Hotel near West Point, became interested in the matter after a number of interviews which Maj. Myer and Lieut. Porter had with him, and he was led to make the endorsement already quoted. Gen. Scott and Secretary Floyd were then at swords' points, and most of his recommendations, particularly in regard to officers of the staff corps, were ignored at the War Department.

Gen. Porter in a note addressed to the writer, says: —

“Whatever the cause was, I was not assigned to duty with Maj. Myer, but our intercourse during those months preceding the breaking out of the Rebellion established a very warm friendship and pleasant intimacy between us, which continued until the time of his death, and I have never ceased to feel the largest degree of interest in the Signal Corps. No one rejoiced more than I that Gen. Myer lived to see the perfect working of his system and the inestimable advantage derived from it during the war, as testified to by our most prominent commanders.”

August 22d, Maj. Myer was ordered to report to Col. T. T. Fauntleroy, 1st Dragoons, commanding the Department of New Mexico, who was directed to afford him such facilities as the service permitted in testing his system of signals. On the conclusion of his experiments, Maj. Myer was directed to report in person at the headquarters of the army. A long and tedious ride across the plains, sterile and lonely, finally terminating in the beautiful garden around Santa Fé, seemed to the imaginative mind, typical of the enterprise upon which he had embarked. Immediately upon reaching Santa Fé, October 6th, orders were issued for the assignment of the service to the command of Col. Canby, then in pursuit of the Navajo Indians. As a first requisite for the fulfilment of the order, the detail of officers for instruction became necessary.



N. W. NEW MEXICO.

In accordance with instructions already received by Col. Fauntleroy from the Secretary of War, two officers were designated for signal duty, —1st Lieut. Lucius L. Rich, 5th Infantry, detailed November 13th, and, shortly after, November 19th, Brevet 2d Lieut. Orlando G. Wagner, Topographical Engineers. The equipment of the service consisted of only three sets of apparatus. Daily practice continued until November 25th, when actual service in the field commenced, and signals were used as an element in the conduct of a campaign. Signal practice now passed from experimental to the practical stage.

The course of instruction passed through by the officers in the command was limited in its duration, and it was only through the constant employment of the time that sufficient information had been gained to warrant the use of signals in active service. As an auxiliary in Indian warfare, however, the system attracted general attention. It is true that some little opposition was manifested to the introduction of "new-fangled" devices, but that was



to be expected, of course, in introducing anything that seemed like an innovation.

The march from Fort Defiance to Fort Fauntleroy began November 25th, with the Signal Corps fully organized. The command consisted of three officers and sixteen men. The equipments were transported on mules, but the apparatus was carried by the men.

The diversified surface of the country afforded an ample test of the ease with which a single man could carry a set of apparatus. It became necessary to ascend steep and rugged hills, and clamber up precipitous rocks in pursuit of available stations, yet it was not difficult to carry the instruments to any point that man could reach. The transmission of messages at distances varying from five to twenty miles, in the midst of boisterous winter weather, served to illustrate the entire feasibility of the system and effectually stifled all prophecy adverse to the Corps. The unimpaired condition in which the apparatus was found on the termination of a campaign of five months, gave conclusive evidence of the strength of the materials. The practical character of the system could no longer be doubted, since it had been so readily comprehended and so effectively used by men only recently initiated into its mysteries.

During the stay at Fort Fauntleroy signal practice was maintained almost constantly. The novelty of the service attracted both officers and men; but it was early discovered that a life of activity and not of leisure was exacted. Detachments were daily ordered to the woods and required to devote hours to practice. The points selected were often difficult of access, and the natural obstacles to travel were heightened by the usual incidents of a winter campaign in the Rocky Mountains. When the locality was reached, the most exposed position was naturally required for occupation, — the topmost peak of a range of hills, perhaps. Sometimes the highest branches in the tallest trees were sought and occupied for hours together. These requirements soon destroyed some of the romance attached to the novel service, and left the realities of signal life alone prominent. Occasionally it became necessary to remain over night to experiment with night signals, though the usual custom was to remain till after dark and make the return journey by starlight. The risks attached to these excursions were by no means trifling.

On the 21st of November, in a note addressed to Capt. Dabney H. Maury, Asst. Adjt.-Gen., Dept. of New Mexico, Maj. Myer had requested that Lieut. L. L. Rich, 5th U. S. Infantry, be detailed as assistant signal officer. He adds: "Lieut. Rich has been assigned to

this duty upon the Navajo Expedition, and it is desirable that his instruction and his services should continue after the close of operations in the field." To this request and suggestion Capt. Maury replies by reporting the difficulty of assigning officers to special service on account of the want of a sufficient number of officers on duty in the department.

Although a considerable portion of the time was allotted to flag practice, it must not be inferred that during the lengthy period spent at Fort Fauntleroy only routine duty was performed. Many opportunities were presented for active service, and were improved. The Signal Corps continually exemplified its efficiency. The various columns of the expedition were kept in constant communication, and scout service was so completely executed that Col. Canby was able to report to the commanding officer of the Department of New Mexico (Dec. 14, 1860), "that the guides and spies, with a few exceptions, have been discharged, and it will not be necessary to replace them."

There was at one time an objection raised to the use of a white flag, from its known character as an emblem of peace. The Indians understood this last function, and fears were expressed that it might cause trouble from their inability to distinguish between a flag of truce and a flag of communication. Lieut. Wagner, in a letter addressed to Maj. Myer, dated December 15th, set forth the difficulties apprehended from this possible misapprehension, and suggested that the flag used in signalling should be made distinctive by a bar running diagonally across the flag, but the modification was not adopted.

Expeditions were frequently sent into the Indian country, of which the Signal Corps formed a component part, and it materially enhanced the prospects of the organization by its effective service. In addition to its regular duties the Corps was required to make a critical examination of the country.

On the 8th of December, an order was issued for the Signal Corps to take the field. A movement in force to the country below Zuni was contemplated, and the columns were to be kept in communication. Lieut. Rich, with six men, was directed to serve with the column under Capt. Lafayette McLaws, 7th Infantry, while Maj. Myer and Lieut. Wagner remained with the main force under Col. Canby. The movement began the next morning at daylight, in the midst of a driving snowstorm. The character of the country and the weather combined made frequent halts necessary. The frozen condition of the streams also proved an annoyance by cutting off the water supply. On the 12th the monotony was relieved by the discovery of an Indian trail.

Instantly the excitement incident to the prospect of a complete change from the humdrum of daily routine pervaded the camp, and a welcome



THE MESA : THE SITE OF ZUNI.

order was issued for prompt and vigilant pursuit. An infantry company was to follow the trail, taking with them one day's rations. The signal officer, with Lieut. Rich, accompanied this detachment, having directions to report "the course followed, direction of trail," etc. Lieut. Wagner remained at camp, with orders to keep a lookout day and night for signals. The

route lay across a plain which had little to attract, unless it might be the impressiveness of its awful desolation. The scene suddenly changed, however, when the command was brought to a halt by the presence of bluffs of red sandstone, which completely barred the path. The trail was again consulted, but its apparent age rendered it nearly certain that it had long fallen into disuse. In the absence of any other mode of egress this old trail was followed. A precipitous rise of red sandstone wall two hundred feet in the air proved a barrier not to be surmounted, and without alternative the path was retraced. Another old path was pursued. Progress was slow, and after a short march, or rather clamber, a dense pine grove presented a maze, impenetrable to vision, which still further retarded the search. After considerable journeying in the dark, the party emerged from the forest, only to find themselves on the edge of a precipice over which could be seen the ground swimming far below. To attain the object in view it became necessary to scramble over a rough and uneven surface, interspersed with boulders of large size along the brink of the immense chasm which yawned at their feet. The futility of a further prosecution of a trail which would evidently be barren of results changed the character of the scout, and led to a search for an eligible position from which communication could be had with the main force. Such a point was soon gained, and, after telegraphing to headquarters, a return march was commenced. The command was soon ordered back to Fort Fauntleroy.

On his return from this scout below Zuni, Maj. Myer sent to Capt. Maury the subjoined earnest protest against frequent changes in officers detailed for signal duty : —

"It is essential to the successful use of signals in the field that I should have practised officers. At distances of fifteen and twenty miles no officer not practised

in the interpretation of signals can use them. It is not necessary that I should support this fact by reasons. I would request that no officer now instructed by me be relieved while duties in the field, so active and important as those upon which we are now entering, are imminent, or before my arrival at Santa Fé, when, if after my representations the department commander deems such relief proper, my responsibility ceases. The duties of the officers under my command are severe and not always pleasant. I shall try to make them useful. If Lieut. Wilcox is available to serve with me, and is willing, knowing the hardships, I should be most happy to have him do so. I like him as an officer, as a gentleman, and as an associate. I would be pleased to have him report to me either upon this expedition or upon my return to Santa Fé, not however, relieving any officer now on duty. Immediately on my return to Santa Fé I propose, under the direction of the department commander, to put Albuquerque and Santa Fé in telegraphic communication. For this service I shall require at least three officers besides myself."



CADMUS WILCOX.

In a communication from Maj.-Gen. Cadmus M. Wilcox, of the Confederate Army, he informs me that he first met Surgeon Myer in the summer of 1859. The lieutenant, a graduate from the Military Academy in the class of 1846, was at that time stationed at Fort Columbus, Governor's Island, New York Harbor. After giving Lieut. Wilcox the requisite amount of instruction, Lieut. Myer went to Staten Island to open communication. They



NEW-YORK HARBOR: FORT WADSWORTH, ON STATEN ISLAND.

were so constantly annoyed by the passing of steamers and sailboats that they were compelled to abandon the attempt. Lieut. Myer then went to Bedloe's Island, but they had even more unfavorable results. Lieut. Wilcox thereupon urged him to select some other officer, and did all that he could to have officers detailed to report to Lieut. Myer, being confident that as soon as this was done, and he had shown the easy practicability of it in the field, his system would be adopted and would remain a part of the regular army instruction, with a corps of officers

and men detailed for that special duty. This was the first attempt at a practical test of the system. In the summer of 1860 Lieut. Wilcox was ordered to take 500 recruits to Santa Fé. He arrived there September 26, and in October met Maj. Myer, on his return from the east. About the time Maj. Myer asked for his detail for signal duty, Lieut. Wilcox was promoted to the captaincy of his company. It was rare in those days that a captain was detached from his company for special service.

Lieut. Wilcox served throughout the war in the Army of Northern Virginia as colonel, brigadier, and major-general. He was present in all the battles fought by that army down to Appomattox, except the First Bull Run and Antietam, reaching the former battlefield on the morning following the engagement, if such it may be called. He was prevented by sickness from taking part in the battle of Antietam.

On his return from the Zuni scout, Maj. Myer sent a communication to each of his associates, — Brevet 2d Lieut. O. G. Wagner, Topographical Engineers, and 1st Lieut. L. L. Rich, — requesting them to furnish reports of signal duties performed by them since they were detailed as acting signal officers. He suggested that such report ought to mention the circumstances of their detail, the opportunities afforded for instruction and practice, the service rendered by them in the field, specifying in regard to the latter, so far as was practicable, the dates, time employed, and the distance, with any other circumstances attending the communication by signals; mentioning also any illustrations of the practical value of such communication which may have occurred to them. He further stated that he should be glad to receive any suggestions as to the modification of the signal apparatus, its transportation, or its use, to which their experience may have led them.

The routine of camp life was again pursued until the evening of December 24th, when a scout upon the river Puero and to Ogola Tarra began. This expedition continued until Jan. 6, 1861. Both officers and men were completely equipped, and, although intended for special service, were ever ready to take a position in the ranks. Great difficulty was occasioned by the lack of available stations, and it was, in consequence, necessary to ascend mountains, which were so precipitous that the men were forced to hand the apparatus and muskets from man to man, they meanwhile clinging to the rocky sides. In this expedition the distance traveled by the three signal officers aggregated nearly six hundred miles.

Immediately after the return to Fort Fauntleroy, January 6th, orders were issued relieving Lieut. Wagner from further duty as acting signal

officer. On January 9th, 2nd Lieut. Wm. J. L. Nicodemus, 5th Infantry, reported for duty.

February 7th, while Lieut. Nicodemus was stationed upon a prominent point on the lookout for a wagon train, a feat was performed which deserves mention. An order was given by signal for the detachment to "fall in," and then they were practised in the manual of arms, each movement being called for by the flag. The succeeding day was employed in observation of the Albuquerque road, orders having been issued to look out for the appearance of any parties in that direction.

Communication was established over a line thirty miles in extent.



This duty occupied the command until the 10th, when the party was recalled by signal from headquarters.

Each of the Gulf States had now passed the ordinance of secession, following the lead of South Carolina, which had thrown off her allegiance to the old flag on the 20th of December preceding. On the 18th of February, Gen. Twiggs, commanding the United States forces in Texas, surrendered to the State authorities all the troops under his command, together with all the military posts and munitions of war within the limits of that State. On the same day Maj. Myer expressed his own loyalty in a communication addressed to Col. Lorenzo Thomas, the successor of Samuel Cooper, who was then giving to the Confederacy the benefit of his military training and experience. He informed the adjutant-general of the army that he regarded it as practicable "to render it almost impossible for an investing force to prevent such com-

munication as may be necessary between any of the sea-coast forts of the United States and the main land, or between them and the vessels in their vicinity."

At the conclusion of the Navajo expedition, Maj. Myer returned to Santa Fé. Military signals had been used for the first time in the actual field service of the United States, and were brought into play under all circumstances of climate and location, with expeditions in the Rocky Mountains and in the vicinity of Santa Fé. On leaving Col. Canby's command he requested an expression of his views as to the possibility of the use of signals with troops in active operations, the practicability of their use by the line officers of the army, and the modes by which their employment might be made of the greatest service to the army and the nation.

Col. Canby's response, though indicating general approval of the



system of signals invented by Maj. Myer, and satisfaction with the results of the experiments carried on under his own observation, was expressed so guardedly, showing a difference of views in some respects with Maj. Myer, and suggesting some modification in the apparatus, that it failed to meet the latter's desires and expectations.

Though he subsequently adopted one of the leading suggestions of Col. Canby, — the employment of special officers instead of the regular line officers, — the reply made to Col. Canby's criticism shows in so marked a degree some of Major Myer's characteristics that it is worthy of being reproduced almost entire. : —

Lieut.-Col. E. R. S. CANBY, U. S. A., SANTA FÉ, N. M., April 11, 1861.

Commanding Navajo Expedition.

"SIR: If it please you and is a correct expression of your views, I would like to have substituted the altered copy of your note of yesterday.

"Your first note, though so kindly meant, yet stands to me as an adverse

report. For I went into the field to show, and it was my boast I could, that the system was so simple and the apparatus so slight and so easy of transportation, and strong, that the signals could be used anywhere, and the plan was applicable for use with any body of men, large or small, with detachments or by any one man even, who, separated from a main body wished to communicate with it. It was with this view that I sent one and two men to the top of mesas or into trees; that I kept out very small parties a day or two, they being then detachments; that I made night marches; that I conducted drills at distances of five miles, and the hundred other trials of last winter. Now I cannot modify the system so as to work any better or more simply. I cannot to any extent modify the apparatus. That I have used was carried five months in the field by a soldier who carried constantly in addition his gun and revolver. I cannot make any essential modification. If I have failed to establish the points I aimed at; if I have not shown that, supposing the officers generally to be properly instructed, the system and apparatus as it is, applicable for use with any body of men, or by any one man for any purpose of communication anywhere that men can go or signals can be used at all, I have failed absolutely and finally. Life is so short that I will abandon the thing and resign.

“I am thus particular in reference to your note for this reason: I look upon your views therein expressed as tantamount to the decision of the whole question. Others may write from hearsay; you only from the actual observation of a commander in the field. I and others will place more value upon your note when published than upon the report of the department commander.

“I regret, Colonel, to have so troubled you in regard to this matter. I have tried to state to you clearly, as I think I ought to do, why the clause of the sentence which seems to say that the system must be modified or altered before it can be made applicable for use with small parties, or in minor affairs, appears in the character of an adverse report.

“If I had thought it so meant I should not have mentioned the subject again. For such use there is nothing necessary except that there be attainable the simple poles and flags, and that the officers know how to use them.

“As Capt. Maury understands the circumstances and my reasons, the changes I have mentioned can be made, if it seems proper to you, without any official formalities.

Your obedient servant,

ALBERT J. MYER,
Maj. and Signal Officer.”

The modification suggested was the addition of the following note:—

“In addition to the opinion heretofore expressed I think it proper to report more specially that the system of military signals invented by Maj. A. J. Myer, Signal Officer, was in practical operation for several months during the campaign

against the Navajo Indians, and was thoroughly tested under the varying circumstances of season, climate, and country.

“The complete success of this trial leaves, in my opinion, nothing to be desired except such a general knowledge of the system by officers of the army as will enable it to be used with detachments, and in the minor operations of a campaign.”

This statement and proposed amendment received the following endorsement: —

“FORT GARLAND, N. M., April 19, 1861.

“Lieut.-Col. Canby acknowledges the receipt of the communication of the Signal Officer of the Army, of the 11th inst. Thinks the substitute proposed will not meet the necessity contemplated in his (Canby's) of the 10th inst. Thinks it impracticable to instruct all the officers in the army in the system of signals. Does not think it necessary or desirable that the system should be extended to the whole army. In his judgment the telegraphic duties for large commands should be confided to officers and men specially selected for that purpose, and that for small commands the system should be modified or abridged so as to admit of an easy and prompt application to the limited necessities of such commands. Recommends that the signal apparatus be made a part of the equipment of every distinct command.”

Col. Fauntleroy had previously testified to the worth of Maj. Myer's system in these words: —

SANTA FÉ, March 20, 1861.

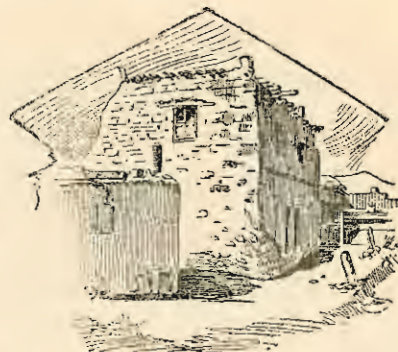
“From the reports of Lieut.-Col. Canby, commanding, and from the statements of officers who have been on duty with the Navajo Expedition, the services of the signal party have been valuable in the operations against the Navajos, and have conclusively demonstrated not only the practical usefulness of field signals, but that they can be used under any of the contingencies of frontier warfare. The campaign has been in winter, in a mountainous country, and with many circumstances of disadvantage. Col. Canby has, in several of his dispatches, very favorably mentioned the signal party.

“T. T. FAUNTLEROY,
Col., 1st Regt. Dragoons,
“Comdg. Dept.”

Col. W. W. Loring (Pacha Loring), who subsequently assumed command of the department, highly commended the work of the Corps, while the cavalry genius of the rebel armies, J. E. B. Stuart, who early appreciated the value of the system, had personally on the 8th of October, 1860, tendered his services to aid in the dissemination of its

principles, and requested Maj. Myer to use his influence to have him detailed for signal duty.

The signal officer on his return to Santa Fé was not accompanied by either of the officers who had acted as assistants during the Indian campaign, but shortly after his arrival, March 4th, orders were issued detailing Brevet 2d Lieut. Cushing, 10th Infantry, for signal duty, in place of Lieut. Rich, ordered to report for duty at the headquarters of the department.



SANTA FÉ : THE OLDEST DWELLING
HOUSE IN THE UNITED STATES.

While Maj. Myer was at the headquarters of the army in New York City awaiting his orders and instructions, he met for the first time Lieut. Samuel T. Cushing. This officer was then on leave of absence, having graduated at West Point the preceding June. As this casual meeting led to a future acquaintanceship which resulted in Lieut. Cushing's identification with the Signal Corps, and in earnest efforts for its prompt reorganization and rapid development, a brief mention of his earlier army life may not be out of place at this point.

Lieut. Cushing's orders carried him to New Mexico at the expiration of his leave of absence, and this fact becoming known to Maj. Myer, he took a more than ordinary interest in the young West Pointer. Maj. Myer started for his station early in September and they did not meet again until December, 1860, when Lieut. Cushing joined his own command at Fort Defiance, N. M. The signal officer had then nearly completed his field service, and in February, 1861, Lieut. Cushing was ordered to command an escort which accompanied him to Santa Fé. On reaching Santa Fé the lieutenant was detailed as his assistant, and was, under his personal instruction, initiated into the mysteries of the four-element code.

During about four months Lieut. Cushing daily took a party of six men, and riding to a hill at a place called Peno's ranch, about eighteen miles distant, opened communication. Signals passed at all hours, sometimes by day and sometimes by night.

On the 6th of May, Maj. Myer was relieved from duty in New Mexico and ordered to Washington to make his reports. Lieut. Cushing's promotion, at this time, to the 2d Infantry, carried him from New Mexico, and he started by stage for Fort Leavenworth to join his command. The news of the capture of Fort Sumter was made known to him about the 3rd of May, when he met the west-bound stage twenty-five miles east of Fort Union. Everything was in confusion when he

joined his company, and the fortunes of war soon carried him to Washington, where, about the 20th of July, he again met Maj. Myer.

An added word with reference to Maj. Myer's early assistants may not be out of place here. Lucius L. Rich entered the army from West Point in 1853. He resigned May 13, 1861. He served in the Confederate Army as a colonel, I believe, in a Missouri regiment.

Bvt. Maj. O. G. Wagner died April 21, 1862, of wounds received while making a brave reconnoissance of the enemy's works before Yorktown, Va.

The career of Wm. J. L. Nicodemus in the War of the Rebellion is recounted in Chapters VIII. and XIV. When he was mustered out of the Corps, Aug. 23, 1865, he was immediately reappointed captain in his regiment, the 12th Infantry, to date from Oct. 24, 1861. He served in various garrisons until 1868, when he was detailed as military instructor in the Western University at Pittsburgh, Pa. He was honorably discharged Dec. 29, 1870, and elected professor of civil engineering in the University of Wisconsin.

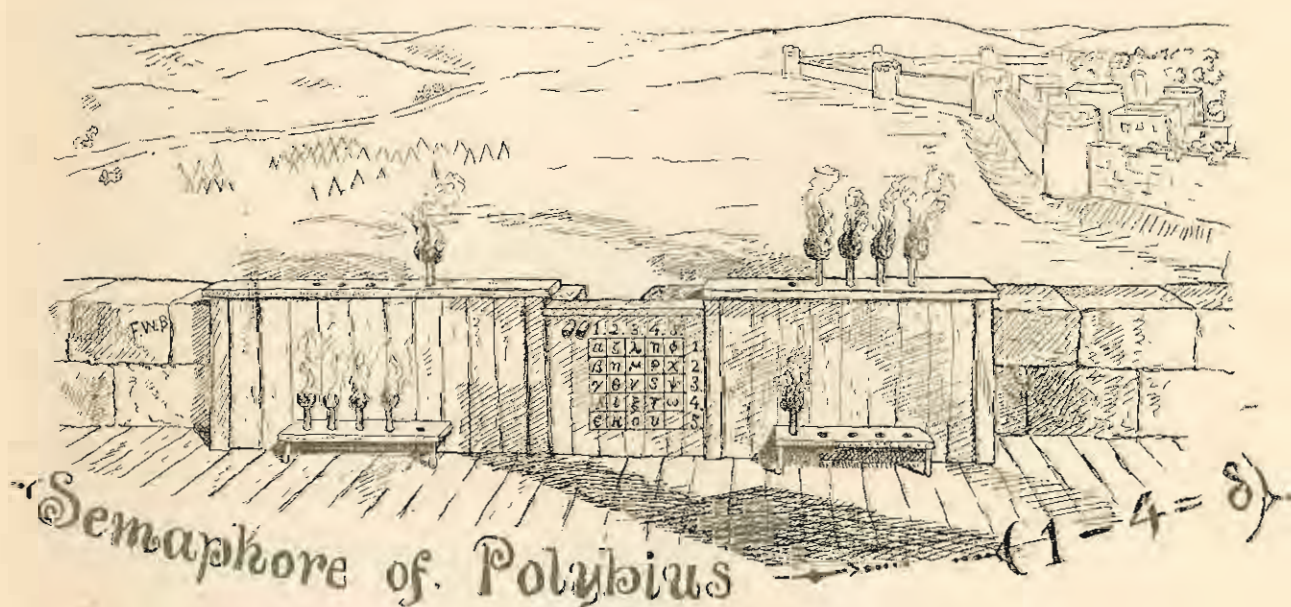
Of his success in this position, C. W. Butterfield, in his History of the University of Wisconsin, says:—

“Ambitious and energetic, he soon gave life to the department to which he had been called. He thoroughly remodeled the course in civil engineering, and soon drew around him a number of students of that specialty, winning from them by his thorough but kindly manliness, by his enthusiastic devotion to their wants, and by his efforts for their subsequent welfare, a warm and lasting regard. Equal success crowned his efforts in the department of military science, where he succeeded in making both popular and useful the drill, which before had always been extremely irksome to the students. His genial manner and varied experience made him a very pleasant companion, and he soon won the regard of his fellow workers at the University. As professor of one of the technical courses, the classes instructed by Prof. Nicodemus were small, and the relationship between teacher and student correspondingly close. Though he met the regular college students but for one term in the class-room, it was not difficult for them to discern, in that short time, those genial heart-qualities, that almost womanly tenderness, which made him the warm personal friend of every worthy man who made his acquaintance. A more striking illustration of the esteem in which the students held Prof. Nicodemus could not be found than the spirit manifested toward him at all times by the university battalion. No man could have been more successful in eliciting an interest in an irksome duty than was he in conducting the military exercises.

“The connection of Prof. Nicodemus with the geological survey of Wisconsin began by his being employed to prepare maps for an annual report. In 1875, he

was regularly commissioned topographical assistant of the survey, and personally prepared or superintended the preparation of all the maps for the report of that year.

“Since his connection with the University of Wisconsin, Prof. Nicodemus had more than once been tempted to leave; and, among other proffers, he received one from Gen. Sherman, with whom he was personally well acquainted, asking him to accept a position as professor of mathematics at twenty-five hundred dollars per annum, in gold, in a college just being started by the Khedive of Egypt. Of modest, retiring disposition, Prof. Nicodemus rarely spoke of himself or of his many experiences. Possessed of a large store of nervous force, he rapidly and efficiently accomplished whatever he took in hand. Ambitious to provide for the wants of his family, should they ever be left without his care, he felt pressed to engage in business enterprises outside of the duties of his professorship. As he was never slack in his duty to the University, he must have drawn very largely on his vitality, to accomplish the work he undertook. This is more especially true of the past university year, when, burdened more than usually with the needs for instruction in his growing department, and with his work for geological survey, he shared largely in the labor, the risks, and anxieties consequent on publishing, along with A. D. Conover, a large and very accurate map of Wisconsin. The draft on his nervous system proved great, and brought on *insomnia*, which finally developed alarmingly. He died in Madison, on the 6th of January, 1879, and was buried near that city, in the beautiful Catholic cemetery of Forest Hill. The position he occupied in the University he continued to fill most acceptably until his death. He was married, in Georgetown, D. C., to Miss Fannie E. Pettit, Dec. 27, 1864.”



Move on the columns! Hesitate
No longer what to plan or do:
Our cause is good — our men are true —
The fight is for the Flag, the State,
The Union, and the hopes of man;
And Right will end what Wrong began,
For God the right will vindicate.

— W. D. GALLAGHER.